

Vacuum Polarization in Mesoatoms.

56-6-32/56

dependence of the shifting of the level 1S of ξ is determined, it is possible to find the shifting of the other levels by differentiation with respect to ξ , which makes computing considerably easier. Computation of the integrals occurring here (in the complex plane) is described. The thus found final expressions for the shifting of the first 6 energy levels of the mesons in the mesoatoms, which were caused by the polarization of the vacuum, are explicitly given. In the case of states with different main quantum numbers n , ξ has different values. The dependence of the shifting of the levels for π^- and μ^- mesoatoms on Z is described by two diagrams.

Taking account of the nuclear volume: Taking the distribution of the charge over the volume of the nucleus into account considerably diminishes the effect of the polarization of the vacuum in mesoatoms with large Z . (With 5 illustrations and 1 table).

ASSOCIATION: Moscow State University. (Moskovskiy gosudarstvennyy universitet, Russian).
PRESENTED BY:
SUBMITTED: 26.11.1956
AVAILABLE: Library of Congress

Card 2/2

IVANENKO, D.D.; PUSTOVALOV, G.Ye.

Mesic atoms. Usp.fiz.nauk 61 no.1:27-43 Ja '57. (MLRA 10:2)
(Mesons) (Nuclei, Atomic)

PUSTOVALOV, G. E., Cand of Phys-Math-Sci -- (diss) "The Effect of Finite Dimensions of a Nucleus on the Energy Level of Mezatoms," Moscow, 1959, 8 pp (Moscow State University im M. V. Lomonosov) (KL, 7-60, 107)

PUSTOVALOV, G. E.

4283. MESOATOMS. D.D. Ivanenko and G.E. Pustovalov.
Uspekhi Fiz. Nauk, Vol. 61, No. 1, 37-43 (1957). In Russian.
A survey article (65 references) covering the experimental
study of mesoatoms, calculation of the volume of the nucleus, the
polarization of vacuum in mesoatoms (two useful tables of relative
energy changes for $2P \rightarrow 1S$ transitions with π - and μ -mesoatoms
for $Z \leq 10$), the interaction of a π -meson with the nucleons of a
nucleus.

C.R.S. Manders

19

RMK GMD

L 33399-66 EWT(d)/EWT(1) IJP(c)

ACC NR: AP6015313

(A, N)

SOURCE CODE: UR/0057/66/036/005/0907/0912

AUTHOR: Ivanova, T. I.; Pustovalov, G. Ye; Reykhrudel', E. M.

ORG: Physics Department, Moscow State University im. M.V.Lomonosov (Moskovskiy gosudarstvennyy universitet Fizicheskiy fakul'tet)

TITLE: Solution of Laplace's equation for a Penning discharge gap

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 5, 1966, 907-912

TOPIC TAGS: Penning discharge, electrostatic field, Laplace equation, mathematic method, approximate solution

ABSTRACT: Because of its practical significance in connection with design and study of Penning discharges, the authors calculate the electrostatic field of a charged cylinder of radius a and length $2L$ located midway between and with its axis perpendicular to two infinite parallel plane grounded electrodes separated by a distance of $2D$. The problem is first solved rigorously by separation of variables in cylindrical coordinates r, θ, z (origin of coordinates at the center of the cylindrical electrode), and a set of linear equations is derived from which the coefficients in the resulting expansion in a series of modified Bessel functions can be calculated. Because of the complexity of the calculations, a second, approximate, calculation technique is developed. This technique is based on the assumption of a particular relatively simple

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ACC NR: AP6015313

form, suggested by results of electrolytic tank measurements, for the potential in the region $r = a$, $L < z < D$. The limiting cases $L \rightarrow 0$ and $L \rightarrow D$ are discussed, and numerical calculations for the case $L/D = 1/2$ are presented and compared with results of electrolytic tank measurements. The approximate calculations are least accurate near the edge of the cylindrical electrode; in this region the error is 10-20 % when 10 terms of the series are employed and the error cannot be reduced below 5-10 % even by using many more terms. The errors decrease rapidly with decreasing r , and four terms of the series give an accuracy of 1 % in the region $r < 4a/5$. The first term alone of the series gives an accuracy of 1 % on the axis. Orig. art. has: 18 formulas, 3 figures, and 1 table.

SUB CODE: 20/

SUBM DATE: 06Jul65/

ORIG REF: 003/

OTH REF: 001

Card 2/2

JS

PUSTOVALOV, G.Ye.

Calculation of the $2p \rightarrow 1s$ transition energy in μ -mesic atoms.
Zhur.eksp.i teor.fiz. 43 no.6:2170-2172 D '62. (MIRA 16:1)

1. Moskovskiy gosudarstvennyy universitet.
(Quantum theory) (Nuclei, Atomic)

S/056/62/043/006/034/067
B125/B102

AUTHOR: Pustovalov, G. Ye.

TITLE: Calculation of the $2p \rightarrow 1s$ transition energy in muonic atoms

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43,
no. 6 (12), 1962, 2170-2172

TEXT: The transition energy $2p \rightarrow 1s$ in muonic atoms of $13 \leq Z \leq 57$ with
smoothed homogeneous charge distribution $\rho(r) = \rho_0 \{1 + \exp[(r-c)/z]\}^{-1}$ (1)
having the parameters $c = 1.08 A^{1/3} \Phi$ and $t = 2.4 \Phi$ is calculated for

$$\rho(r) = \rho_0 \left[1 - \frac{1}{2} \exp(-n) \right]^{-1} \cdot \begin{cases} 1 - 1/2 \exp[-n(1-r/c)], & r \leq c \\ 1/2 \exp[n(1-r/c)], & r \geq c \end{cases} \quad (3)$$

(K. W. Ford, D. L. Hill, Ann. Rev. of Nucl. Sci., 7, 231, 1957). A is the
atomic weight of the natural isotope mixture. In the result for the Fermi
model the influence of vacuum polarization on the energy levels (allowing
for finite nuclear dimensions) was taken into account. The $1s_{1/2}$ level

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B125/B102

Calculation of the $2p \rightarrow 1s$...

energies, the position of the center of mass of the $2p$ level, and the relativistic splitting ($2p_{3/2} - 2p_{1/2}$) have been numerically determined for 24 isotopes. Except for potassium, the results deviate from experimental data by a maximum of only 1%. Experiments on the scattering of electrons and on the radiation from muonic atoms agree sufficiently well. Nuclei in the range between Ca and Zn are apparently more compact than according to (1). The distribution (3) agrees less well with experimental data than (1). There are 1 figure and 1 table. ✓

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: June 22, 1962

Card 2/2

Ivanenko, D.D., Pustovalov, G.F.
AUTHOR: IVANENKO, D.D., PUSTOVALOV, G.F.

PA - 2170

TITLE: Mesoatoms. (Russian)

PERIODICAL: Uspekhi Fiz.Nauk, 1957, Vol 61, Nr 1, pp 27-43 (U.S.S.R.)

Received: 3 / 1957

Reviewed: 4 / 1957

ABSTRACT:

Compared with ordinary hydrogen-like atoms with electrons, mesoatoms have some peculiar features: small distance between meson and nucleus, the possibility of capture of a meson by the nucleus, nuclear interaction between the meson and the nucleons of the nucleus, simultaneous existence of particles of various sorts (electrons and mesons) in the orbits of the atom, various spins of mesons etc. The study of mesoatoms furnishes many new data concerning the structure of nuclei and the interaction of particles. The energy values, orbital radii, and the transition probabilities of mesoatoms are described in first approximation by the formulae for ordinary hydrogen-like atoms with electrons. Shape and dimensions, however, influence to a great extent the entire system of energy levels of the meson in the mesoatom. Therefore, the meson in the mesoatom, as a much more effective medium (compared to the electron in an ordinary atom) is suited for the investigation of nuclear properties (dimensions, shape, distribution of positive charge over the nuclear volume, electric quadrupole momentum of the nucleus, forces of non-electromagnetical origin between meson and nucleons). On the other hand, the study of meso-

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Mesoatoms.

PA - 2170

atoms facilitates the precise mentioning of some data concerning the meson itself, e.g. concerning its magnetic momentum and its mass. First the experimental investigation of mesoatoms is discussed. A device typical for this purpose is demonstrated by means of a drawing. The energy of the transitions of some mesoatoms could be investigated also by means of the method of critical absorption. Also the quantum yield can be determined by the same method. By means of the quantum yield the ratio between the capture probability of the meson by a nucleus with a given orbit and the probability of radiation transition can be determined. Consideration of nuclear volume: Because of the smeared out character of the charge over a finite volume the levels of mesoatoms are shifted in an upward direction with respect to the level expected for punctiform nuclei. This effect is strongest in the case of an S-level, and less expressed in the case of P- and D-levels. The influence of the dimensions and the shape of the nucleus is expressed to a great extent especially by the position of the energy levels of mesoatoms with great Z. The polarization of the vacuum in mesoatoms supplies an interesting and essential correction for the energy of levels of meso-

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PA - 2170

Mesoatoms.

atoms which is discussed here in detail.

Finally, the interaction between a pion and the nucleons of the nucleus is discussed.

ASSOCIATION: Not given

PRESENTED BY:

SUBMITTED:

AVAILABLE: Library of Congress

PUSTOVALOV G. Ye.

JOURNAL OF EXPERIMENTAL AND THEORETICAL PHYSICS
Vol 32, Nr 6, 1957

*71-PM
1-800*

24
VACUUM POLARIZATION IN MESOATOMS *19*

G. Ye. Pustovalov

Abstract
Level shifts in mesoatoms due to vacuum polarization produced by the nuclear electric field are computed. Closed formulae are obtained for the first six level shifts by aid of recursion relations between the meson wave functions. For heavy mesoatoms the shifts for the first three levels are computed with account of the finite volume of the nucleus.

of PM

Moscow State U.

PUSTOVALOV, I.

Modern bourgeois economics in the service of monopoly capital.
Vop. ekon. no.5:50-61 My '63. (MIRA 16:6)

(Economics) (Capitalism)

PUSTOVALOV, I.

Modern bourgeois economics in the service of monopoly capital.
Vop. ekon. no.5:50-61 My '63. (MIRA 16:6)

(Economics) (Capitalism)

PUSTOVALOV, I.I., inzh.; LEBEDEV, K.S., inzh.; LYUBCHENKO, A.M., inzh.;
MATVEYEV, V.A., inzh.. Prinimal uchastiye SHAPOSHNIKOV, A.V..
BLOKHINA, V.V., red.; PECHENKIN, I.V., tekhn.red.

[Approximate time norms for repair work; metal machining, fitting, fitting-assembly, electric welding, gas welding, and forging operations for collective farms and state farms] Primernye normativy vremeni na remontnye raboty; mekhanicheskaya obrabotka metallov, slesarnye, slesarno-svarochnye, elektrosvarochnye, gazosvarochnye i kuznechnye raboty dlia kolxozov i sovkhov. Moskva, Izd-vo M-va sel'skogo khoz. SSSR, 1960. 199 p. (MIRA 13:6)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po voprosam truda i zarabotnoy platy.
(Machine-shop practice)

24(5),21(7)

AUTHOR: Pustovalov, G. Ye.

SOV/56-36-6-26/66

TITLE: Energy Levels and Approximate Wave Functions of Mesic Atoms
(Urovni energii i priblizhennyye volnovyye funktsii mezoatomov)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959,
Vol 36, Nr 6, pp 1806-1817 (USSR)

ABSTRACT: The distribution of the positive charge within the nucleus is an important problem; one of the possible means of dealing with this problem is the method of the μ -mesic atom (Refs 1-3). For purposes of interpretation calculation of the position of the energy levels of the meson in mesic atoms for various charge distributions in the nucleus is necessary, which is the task to be performed in the present investigation. In his introduction, the author mentions the points in which the problem of the mesic atom deviates from that of the ordinary atom, and he discusses the main difficulties arising in energy level calculations (in the case of μ - and mesic atoms with $Z \geq 10$) as well as programing and calculation by means of an electronic computer. Figure 1 shows an interesting diagram - a comparative survey of the shift of the $1S$ level $\Delta E/E_0$

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as a result of taking the nuclear volume into account,

Energy Levels and Approximate Wave Functions of
Mesic Atoms

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in dependence on the parameter t , found by employing various methods (perturbation theory in the first order with Kepler's wave functions - total as well as the first term of the expansion in series with respect to t ($\Delta E/E_0 \sim 0.08 t^2$); perturbation theory in first order with oscillator wave functions; variation method; expansion in series with respect to Δn (quantum defect) up to and including the quadratic term; asymptotic representation of the external wave function and exact (numerical) solution. Part 2 of this paper deals with the derivation of the solution of the wave function in- and outside the nucleus. In the following chapter numerical results are given. The energies of the 1S-, 2S-, 3S-, 2P-, and 3P levels of mesic atoms are calculated in nonrelativistic approximation on the assumption of a uniform nuclear charge distribution within a sphere of the radius R . By numerical solution of the Schrödinger equation formulas are deduced for the dependence of the quantum defect Δn on $t = R_0 Z/a_\mu$ (a_μ is Bohr's radius of the meson orbit)(cf Fig 1). Δn is represented by the formula

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$$\Delta n = A_0 + A_1 t + A_2 t^2 + \dots A_5 t^5 + (C_0 + C_2 t^2) \exp(-B_1 t - \dots - B_4 t^4).$$

The coefficients of this formula are given by table 1 for all investigated levels. In the following the numerical computation of the wave functions (Fig 2) and of the approximated wave functions (Table 2) is discussed. Chapter 4 finally gives numerical examples for the application of the approximated wave functions. It is shown how relativistic corrections and level shifts due to change of the shape of the nuclear charge distribution can be found by employing these approximate wave functions and the perturbation theory. There are 2 figures, 3 tables, and 14 references, 6 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: January 20, 1959

Card 3/3

PUSTOVALOV, I., inzh.; LYUBSHEIKO, A., inzh.

Establishing norms for electric and gas welding. Tekh. v
sel'khoz 20 no.7:90-93 JI '60. (MIRA 13:9)
(Electric welding) (Gas welding and cutting)

PUSTOVOYT, I.M. (Chernigovskaya oblast', Dmitriyevskiy rayon, s.Rubanka)

Emergency treatment of acute surgical and gynecologic cases
in rural sector hospitals. Nov.khir.arkh. no.1:110-113
Ja-F '59. (MIRA 12:6)

1. Uchastkovaya bol'nitsa s.Rubanka, Dmitriyevskogo rayona,
Chernigovskoy oblasti.
(MEDICAL EMERGENCIES) (MEDICINE, RURAL)

PUSTOVALOV, I. S.

O piatiletneu plane razvitla narodnogo Khoziaistva Sverdlovzkoy oblasti
v 1946-1950 gg. Sverdlovsk, Ogis-Sverdipiz, 1946.

Title translated: The five year plan for the development of the economy
of the Sverdlovsk province during 1946-1950.

PUSTOVALOV, I.S.; BALBEKOV, S., redaktor.

[Newspaper coverage of industrial and transportation problems]

Osveshchenie v gazete voprosov promyshlennosti i transporta.

Moskva, Izd-vo Vysshaia partiinaia shkola pri TsK KPSS, 1953.

23 p.

(MIRA 7:11)

(Journalism) (Industry)

VELICHKIN, I.N., kand. tekhn. nauk; BAYEV, Ye.V.; NISNEVICH, A.M.,
kand. tekhn. nauk; PUSTOVALOV, I.M.

Effect of various hopping-methods on the wear of piston rings
of a tractor diesel engine. Avt. prom. 29 no.4:6-8 Ap '63.
(MIRA 16:6)

1. Gosudarstvennyy soyuznyy naučno-issledovatel'skiy trakt. inst.
institut.

(Diesel engine--testing)

ISAYEV, Ye.V.; NISNEVICH, A.I.; PUSTOVALOV, I.V.

Measurements of wear by radioactive-tracer technique. Zav.
lab. 29 no.9:1104-1106 '63. (MIRA 17:1)

1. Nauchno-issledovatel'skiy traktorny institut.

PUSTOVALOV, I.

Social distinctions and overcoming them under communism.

Vop. ekon. no. 10:51-60 0 '61. (MIRA 14:10)

(Social classes)

ARTEM'YEV, Yu.N., kand. tekhn. nauk; ASTVATSATUROV, G.G., inzh.;
 BARABANOV, V.Ye., inzh.; BARYKOV, G.A., inzh.; BISNOVATYY, S.I.,
 inzh.; GALAYEVA, L.M., inzh.; GAL'PERIN, A.S., kand. tekhn. nauk;
 GAL'CHENKO, I.I., inzh.; GONCHAR, I.S., kand. tekhn. nauk;
 DECTYAREV, I.L., kand. tekhn. nauk; DYADYUSHKO, V.P., inzh.;
 YERMAKOV, I.N., inzh.; ZHOTKEVICH, T.S., inzh.; ZUSMANOVICH, G.G.,
 inzh.; KAZAKOV, V.K., inzh.; KOZLOV, A.M., inzh.; KOROLEV, N.A.,
 inzh.; KRIVENKO, P.M., kand. tekhn. nauk; LAPITSKIY, M.A., inzh.;
 LEBEDEV, K.S., inzh.; LIBERMAN, A.R., inzh.; LIVSHITS, L.G., kand.
 tekhn. nauk; LOSEV, V.N., inzh.; LUKANOV, M.A., inzh.; LYUBCHENKO,
 A.N., inzh.; MAMEDOV, A.M., kand. tekhn. nauk; MATVEYEV, V.A.,
 inzh.; ORANSKIY, N.N., inzh.; POLYACHENKO, A.V., kand. tekhn. nauk;
 POPOV, V.P., kand. tekhn. nauk; PUSTOVALOV, I.I., inzh.;
 FYTCHENKO, P.I., inzh.; PYATETSKIY, B.G., inzh.; RABOCHIY, L.G.,
 kand. tekhn. nauk; ROL'BIN, Ye.M., inzh.; SELIVANOV, A.I., doktor
 tekhn. nauk; SEMENOV, V.M., inzh.; SKOROKHOD, I.I., inzh.; SLABODCHIKOV,
 V.I., inzh.; STORCHAK, I.M., inzh.; STRADYMOV, F.Ya., kand. tekhn.
 nauk; SUKHINA, N.V., inzh.; TIMOFEYEV, N.D., inzh.; FEDOSOV, I.M.,
 kand. tekhn. nauk; FILATOV, A.G., inzh.; KHODOV, L.P., inzh.;
 KHROMETSKIY, P.A., inzh.; TSVETKOV, V.S., inzh.; TSEYTLIN, B.Ye.,
 inzh.; SHARAGIN, A.M., inzh.; CHISTYAKOV, V.D., inzh.; BUD'KO, V.A.,
 red.; PESTRYAKOV, A.I., red.; GUREVICH, M.M., tekhn. red.
 (Continued on next card)

ARTEM'YEV, Yu.N.--- (continued) Card 2.

[Manual on the repair of machinery and tractors] Spravochnik po
remontu mashinno-traktornogo parka. Pod red. A.I.Selivanova.
Moskva, Sel'khozizdat. Vols.1-2. 1962. (MIRA 15:6)
(Agricultural machinery---Maintenance and repair)
(Tractors---Maintenance and repair)

PUSTOVALOV, I.I.; LEBEDEV, K.S.; LYUBCHENKO, A.M.; MATVEYEV, V.A.;
DIMITIYEV, I.N., red.; SOKOLOVA, N.N., tekhn. red.

[Setting technical norms in repair workshops] Tekhnicheskoe
normirovanie v remontnykh masterskikh. Moskva, Sel'khozizdat,
1962. 270 p. (MIRA 15:7)
(Repairing--Standards)

SERDYUCHENKO, D.P.; GLEBOV, A.V.; KADENSKAYA, M.I.; LEONOVA, Ye.P.;
KADENSKIY, A.A.; PAVLOV, V.A.; PUSTOVALOV, L.V., *otv.red.*;
KOTLYAREVSKAYA, P.S., *red.izd-va*; GUS'KOVA, O.M., *tekhn.red.*

[Iron ores of southern Yakutia; geology, mineralogy, genesis and
industrial importance] Zheleznye rudy Iuzhnoi Iakutii; geologiya,
mineralogiia, genezis i promyshlennoe znachenie. Moskva, Izd-vo
Akad.nauk SSSR, 1960. 519 p. (MIRA 13:6)

1. Chlen-korrespondent AN SSSR (for Pustovalov).
(Yakutia--Iron ores)

BARDIN, I.P., akademik, glavnyy red. [deceased]; VOL'FKOVICH, S.I., akademik, otv.red.toma; UVAROV, G.V., red.toma; KOMAROV, V.P., dotsent, red.toma; LAVRENT'YEV, M.A., akademik, red.; DIKUSEIN, V.I., akademik, red.; NEMCHINOV, V.S., akademik, red.; VEYTS, V.I., red.; LEVITSKIY, O.D., red.; NEKRASOV, N.N., red.; PUSTOVALOV, L.B., red.; KHACHATUROV, T.S., red.; ROSTOVTSSEV, N.F., akademik, red.; POPOV, A.N., red.; GRAFOV, L.Ye., red.; GASHEV, A.D., red.; PROBST, A.Ye., prof., red.; VASYUTIN, V.F., prof., red.; KROTOV, V.A., prof., red.; VASIL'YEV, P.V., doktor ekonom.nauk, red.; LYUDOGOVSKIY, G.I., kand.tekhn.nauk, red.; LETUNOV, P.A., kand.geol.-mineral.nauk, red.; SHKOL'NIKOV, M.G., kand.ekonom.nauk, red.; BANKVITSER, A.L., red. izd-va; BRUZGUL', V.V., tekhn.red.

[Chemical industry] Khimicheskaya promyshlennost'. Moskva, 1960.
(MIRA 13:7)
202 p.

1. Akademiya nauk SSSR. Sovet po izucheniyu proizvoditel'nykh sil. Sibirskoye otdeleniye. 2. Chleny-korrespondenty AN SSSR (for Veyts, Levitskiy, Nekrasov, Pustovalov, Khachaturov). 3. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Rostovtsev). 4. Daystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR (for Popov). 5. Zamestitel' predsedatelya Gosplana RSFSR (for Grafov). 6. Chlen Gosplana RSFSR (for Gashev). 7. Zamestitel' predsedatelya Gosudarstvennogo komiteta Soveta Ministrov SSSR po khimii (for Uvarov).
(Chemical industries)

PUSTOVALOVA, L.M.

Nucleic acids in cholera and cholera-like vibrioses. Vop. med.
khim. 8 no.6:578-581 N.D. 1966. (MIRA 17:5)

1. Kafedra bicknind. Rostovsk. gos. i meditsinskogo instituta.

PUSTOVALOV, L.V.

Basic principles in the classification of sedimentary rocks.
Uch.zap. IGU no.310:81-110 '62. (MIRA 16:11)

1. V. PUSTOVALOV. *Geochem. facts and their meaning in general and economic geology.* I. V. PUSTOVALOV. *Problem Sovet. Geol.* 1, 57-80(1933).—A theory of the dependence of the formation of mineral species upon the physicochem. conditions is developed and applied in detail to the transformation dehydration process Fe oxide-gel → limonite → goethite → hematite.

F. H. RATHMANN

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

1. V. PUSTOVALOV. *Geochem. facts and their meaning in general and economic geology.* I. V. PUSTOVALOV. *Problem Sovet. Geol.* 1, 57-80(1933).—A theory of the dependence of the formation of mineral species upon the physicochem. conditions is developed and applied in detail to the transformation dehydration process Fe oxide-gel → limonite → goethite → hematite.

F. H. RATHMANN

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CA 1. The geochemistry of the Baskuntschak Sea. L. Pustovalov. <i>Trans. Geol. Prospecting Service U.S.S.R.</i> 204, 25 (1961) 1933. <i>Neues Jahrb. Mineral. Geol.</i> Releve 11, 1935, 514-16. Three types of springs feed the salt sea of Baskuntschak—salt water, surface water and bitter salt springs. All springs bring in about 8 million cu. m. of water per annum. Analyses of salts from 3 salt works are given. The crude salts run about 98% NaCl. J. F. Schairer																																																																													
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1ST AND 2ND COLUMNS										PROCESSES AND PROPERTIES INDEX										3RD AND 4TH COLUMNS									
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Occurrence of iron ores and phosphates near Sukhtel. L. V. FURMANOV (Trans. Moscow Geol. Trust, 1984, No. 5, 8-74). The deposits are de- scribed. Analyses are given. Ch. Abs. (c)																													
400-55 A METALLURGICAL LITERATURE CLASSIFICATION																													
FROM SYNOPTIC										COLLECTOR										FROM SYNOPTIC									
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THEORY OF THE EARTH AND ITS HISTORY

"On the Distribution of 'Heavy' Minerals among Rock Types of the Near-Zira Lowlands Productive Formation," *Lok. AN* 52, No 2, 1943.

Sect. Sedimentary Rock, Inst. Geological Sci., Dept. Geol.-Geog. Sci., AS

FUCHY, V. I. V., Leonid Vasil'yevich

"On the Distribution of Gypsum in Rock Types of the Productive Formation of the Azerbaijan SSR," Dok. AN 52, No 4, 1946.

Inst. Geol. Sci., AS Azerbaijan SSR

The conjugation of granulometric, mineralogical, and chemical composition of rocks of the near-Kura lowland productive formation. L. V. Pastovalov and A. D. Soltanov. *Compt. rend. acad. sci. U.R.S.S.* 52, 251-4 (1946).

On the basis of extensive analytical data, correlation is established between the granulometric compn. of the rocks, their heavy mineral content, their HCl (10%) sol. components, and geographic distribution. The conclusions drawn are based on 252 granulometric analyses, 263 analyses of heavy mineral fractions isolated from the alevrite fraction 0.1-0.01 mm., and 228 chem. analyses of HCl extrs. The ratio of heavy minerals to sol. components varied regularly with the change in granulometric compn. From NW to SE appear, in the order given, chibabite rocks, sands and sandy loams, alevrolites and loams, and argillaceous rocks. The rocks are apparently genetically related and represent a continuous series of mech. differentiation products, with the assoc. chem. selection of elastic minerals. The content of biotite, zircon, tourmaline, garnet, and muscovite increases in the direction of the fine-grained rocks. Limonite and weathered minerals show the same trend. Of opposite trend are augite, hornblende, ilmenite, and magnetite. Al_2O_3 is at a max. content where arenaceous and sandy loams are predominant; Fe_2O_3 predominates where alevrite and loamy rocks predominate; and CaO is at a max. where clays are at a max.

Ester W. Claff

Terrigenous mineralogical facies. I. V. Pustovak, *Iyul. Moshor* (Dobroslava Ispytatel' Prirody, Odess. Gos. 22, 100, 1947); *Chem. Zentr.* (Russian Zone Ed.) 1940, 1: 277-8.—By using screen analyses and microscopic examination, a study was made of the composition of rock samples of grain size 0.1 to 0.01 mm. Results are treated from the point of view of petroleum geology. Typical triangular 3-coordinate diagrams were developed for the individual rocks. The distribution of heavy minerals within the individual rock types was also investigated. The significance of the results from the lithogenic standpoint is discussed. M. G. Moore.

USSR/Geology - Stratigraphy Jan/Feb 50
Minerals - Mineral Deposits

"Progress in the Study of Sedimentary Rocks and
Sedimentary Mineral Fuels in the USSR," L. V.
Pustovalov, 10 pp

"Iz Ak Nauk SSSR, Ser Geol" No 1

PA156T37
Lithological studies of oil-bearing mineral reef
massifs in Ishimbay exceeded all similar studies
in thoroughness. Old oil-industry area of Azer-
baydhan has been expanded considerably and now
reaches far beyond the Apsheron Peninsula, to-
ward neighboring land and toward the Caspian

USSR/Geology - Stratigraphy (Contd) Jan/Feb 50

156T37

Sea. Oil is also obtained from Groznensk in
Azerbaiydzhan, and from the Urals and Dagestan,
lands along the Volga and Krasnodar Kray, Uz-
bekistan and Turkmenia, Emba region, Georgia,
and Sakhalin. Huge new deposits of iron ores
were discovered near Kursk magnetic anomaly,
Khaitlovo and Khoperskoye. To the Mn ore de-
posits in Nikol'skoye and Chistura was added
the Usinskoye deposit in Western Siberia of new
geological type.

156T37

PUSTOVALOV, L. V.

188750

USSR/Geophysics - Quartz, Clastic

Jul/Aug 51

"Clastic Quartz From the Productive Strata of
Apsheron Peninsula," L. V. Pustovalov

"Iz Ak Nauk SSSR, Ser Geol" No 4, pp 106-126

Presents new data on the content and distribution of clastic quartz in the rocks of the productive strata of Apsheron Peninsula. Using V. S. Knyshev's data, the author discusses the distribution of various types of clastic quartz in the rocks of the productive strata of Apsheron Peninsula and compares the rocks of the productive strata of this territory with certain rocks of another geological age from other rayons. Maps and charts show composition and location of quartz types.

LC

188750

PUSTOVA LOV, L.V.

BELYANKIN, B.S., akademik, redaktor; VLASOV, K.A., redaktor; AFANAS'YEV,
G.D., redaktor; PEYVE, A.V., redaktor; PUSTOVALOV, L.V., redaktor;
STRAKHOV, N.M., redaktor; YABLOKOV, V.S., redaktor

[Resolution of a conference on sedimentary rocks] Reshenie sove-
shchaniia po osadochnym porodam. Moskva, Izd-vo Akademii nauk
SSSR, 1953. 31 p. [Microfilm] (MLRA 7:10)

1. Chlen-korrespondent AN SSSR (for Strakhov)
2. Akademiya nauk
SSSR. Otdeleniye geologo-geograficheskikh nauk.
(Rocks, Sedimentary)

SHCHERBAKOV, D.I., akademik, redaktor; AFANAS'YEV, G.D., redaktor;
VLASOV, K.A., redaktor; PEYVE, A.V., redaktor; PUSTOVALOV, L.V.,
redaktor; YABLOKOV, V.S., redaktor; NOSOV, G.I., redaktor.

[Conference on sedimentary rocks] Soveshchanie po osadochnym
porodam. Moskva, Izd-vo Akademii nauk SSSR. No.2 [Proceedings]
Doklady. 1955. 262 p. [Microfilm] (MLA 8:7)

1. Chlen-korrespondent AN SSSR (for Afanas'yev). 2. Akademiya
nauk SSSR. Otdeleniye geologo-geograficheskikh nauk.
(Rocks, Sedimentary)(Bibliography - Rocks, Sedimentary)

NALIVKIN, D.V.; PUSTOVALOV, L.V., otvetstvennyy redaktor; PERMINOV, S.V.,
redaktor izdatel'stva; ZENDEL', M.Ye. tekhnicheskii redaktor

[Facies science; geographical conditions of the formation of deposits]
Uchenie o fatsiakh; geograficheskie uslovia obrazovaniia osadkov.
Moskva, Izd-vo Akademii nauk SSSR. No.1. 1955. 534 p. No.2. 1956. 393 p.
(MLRA 9:7)

1. Chlen-korrespondent AN SSSR (for Pustovalov)
(Geology) (Sedimentation and deposition)

SOKOLOVA, Yelena Ivanovna; LISTOVA, Lidiya Pavlovna; VAYNSHTEYN, Anna Zimil'yevna
PUSTOKALOV, L.I., redaktor; ZAL'TSMAN, Ye.I., redaktor; POLESITSKAYA,
S.M., tekhnicheskii redaktor.

[Equilibrium systems of ferri- and ferrosilicate sulfates and
chlorides] Ferrisilikatnye i ferrosilikatnye sul'fatnye i khloridnye
sistemy ravновassia. Moskva, Izd-vo Akademii nauk SSSR, 1956. 65.
(Akademiia nauk SSSR. Geologicheskii institut. Trudy, no.3)
(Silicates) (Sulfates) (Chlorides) (MLA 9:10)

POPOV, P.G.,
KLENOVA, M.V. prof.; SOLOV'YEV, V.F.; ARTYUNOVA, N.M.; POPOV, P.G.; YASTREBOVA, L.A.;
BATURIN, V.P.; KOPYLOVA, Ye.K.; TEODOROVICH, G.I., redaktor; TOPCHIYEV,
A.V., akademik, redaktor; MIRONOV, S.I., akademik, redaktor; ALIYEV,
M.M., redaktor; AKHMEDOV, G.A., redaktor; VARENTSOV, M.I., redaktor;
DMITRIYEV, Ye.Ya., redaktor; DOLGOPOLOV, N.N., redaktor; IL'IN, A.A.,
redaktor; MEKHTIYEV, Sh.F., redaktor; MOZESON, D.L., redaktor; PUSTO-
VALOV, L.V., redaktor; FOMIN, A.V., redaktor; NOSOV, G.I., redaktor;
KISELEVA, A.A., tekhnicheskii redaktor

[Recent sediments of the Caspian Sea] Sovremennye osadki Kaspiiskogo
moria; Moskva, Izd-vo Akademii nauk SSSR, 1956. 302 p. (MIRA 9:3)

1. Deystvitel'nyy chlen AN AzSSR (for Aliyev) 2. Chlen-korrespondent
AN SSSR. (for Varentsov, Pustovalov) 3. Nachal'nik morskogo otryada
Azerbaydzhanskoy neftyanoy ekspeditsii SOPS AN SSSR (for Klenova)
(Caspian Sea)

PUSTOVALOV, L.V.; OBRUCHEV, V.V.

Comprehensive study of productive forces for 1915-1955 made by the
Academy of Sciences. Izv.AN SSSR.Ser.geog.no.4:85-98 J1-Ag '56.
(Natural resources) (Russia--Industries) (MLRA 9:10)

15-57-12-17259

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 12,
pp 79-80 (USSR)

AUTHOR: Pustovalov, L. V.

TITLE: Secondary Alterations in Sedimentary Formations and
Their Geological Significance (Vtorichnyye izmeneniya
osadochnykh gornykh porod i ikh geologicheskoye
znachenie)

PERIODICAL: Tr. Geol. in-ta, AN SSSR, 1956, Nr 5, pp 3-52.

ABSTRACT: The process of rock formation is accompanied by sub-
stantial secondary alterations in the rock composition.
These alterations are expressed in the change of the
material composition of rocks. Study of ancient
sedimentary strata, which exhibit no obvious signs of
metamorphism, shows that these strata very often contain
newly formed minerals which are characteristic for the
metamorphic and even for the magmatic rocks. Native
secondary iron, copper and gold are encountered in the

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15-57-12-17259

Secondary Alterations in Sedimentary Formations (Cont.)

deposits of different ages in various localities; the nonmetallic elements are represented by native sulfur of sedimentary origin. Such secondary oxides as hematite, magnetite, spinel, rutile, anatase and brookite, which are normally characteristic of deeply metamorphosed rocks, are also found in the sedimentary rocks. The process previously described by A. Ye. Fersman [*Geokhimiya Rossii*, Nr 1, Petrograd, Nauch. khim.-tekhn. izd-vo, 1922 (Russian Geochemistry, Nr 1, Petrograd, Scientific Chemical and Technical Publications, 1922)]⁷, and dealing with feldsparization (formation of secondary feldspars in the sedimentary rocks), was proven to be true by a large number of definite geological examples. The existence of secondary orthoclase, microcline, albite, anorthoclase, plagioclase (An_{20}), anortite and sodium orthoclase in such rocks may be taken for granted. Previously, zeolites and similar minerals were known mainly as the minerals associated with the hydrothermal processes; but by this time many authors have proven the possibility of formation of these minerals during the secondary alterations of sedimentary rocks. Secondary analcite, lomontite, chlorite, talc and mordentite (sic mordenite?) have been found also. Geological

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15-57-12-17259

Secondary Alterations in Sedimentary Formations (Cont.)

literature cites numerous cases of newly formed tourmaline being found in the sedimentary Paleozoic and Mesozoic rocks, even though this mineral was previously considered as characteristic of strongly metamorphosed strata. Garnets of secondary origin have been encountered in Paleozoic deposits at a number of places. Secondary silicates, such as the low temperature zircon, clinozoisite, epidote, chlorite, micas, sepiolite, mountain leather and sphene have also been encountered. The most commonly found of the holocene compounds is an earthy variety of fluorite (ratovkite). The finds of secondary carbonates (calcite, aragonite, dolomite, siderite, rhodochroite and magnesite) in the form of veins, infiltrations, inclusions, geodes etc., are well known; all these have previously been considered to be of a hydrothermal origin. Secondary sulphates (barite and celestite) migrate upward at high temperatures and crystalline in the sedimentary rocks in the form of new secondary minerals. The author gives some thought to the sedimentary origin of the sulphides of iron, copper, zinc, lead and other metals; this subject is of a special interest in view of the fact that secondary sedimentary

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15-57-12-17259

Secondary Alterations in Sedimentary Formations (Cont.)

origin of some workable sources of these minerals has been proven to be true (Dzhezkazgan Kingi deposit of copper sulphides). All the examples cited above indicate that the formation of minerals which reach their full development under high-temperature conditions of metamorphism and magmatic activity, and also of the minerals which represent intermediate stages leading to the minerals typical for the high-temperature processes, begins long before the time when the sedimentary rocks are altered into the metamorphic ones; furthermore, this process takes place at low temperatures and low pressures. Under the influence of rising temperature and pressure a part of the mobile components migrates upward, where they either undergo recrystallization, or enter into the composition of gases and waters. Thus, the process of epigenesis should be considered a stage of early metamorphism. In considering the energy employed in the process of rock formation, the author assumes that sedimentary formations themselves act as a basic store of energy; they carry with them huge reserves of solar energy down to the depths of the earth's crust. The author shows, by using some hypogene minerals (kaoline) as an example, how solar energy is stored by the surface formation and

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15-57-12-17259

Secondary Alterations in Sedimentary Formations (Cont.)

then transferred during the process of recrystallization under the conditions of increased temperature and pressure (feldspars). For this reason sedimentary deposits may be taken to represent vast conductors of cosmic energy to the interior of the earth, where this energy is used in various geological processes including the remelting of sedimentary formations. These formations carry with them large quantities of water from the surface to the depths of the earth--"chemical water", water of crystallization, colloidal water, capillary water. A considerable amount of this water is separated from the rocks as the temperature and pressure increase. This may explain the process of formation of hydrothermal waters which at present are considered to be of magmatic origin. A large amount of data indicate that some thermal waters are made up of waters which had been carried to the interior by sedimentary rocks. During their upward migration they become enriched with mineralizing components. Taken together, the data presented above lead us to the conclusion that sedimentary strata, after a prolonged period of rest within the earth's crust where they undergo several alterations, assume certain

Card 5/6

FUSTOVALOV, L.V.

Secondary feldspars in sedimentary rocks (survey of the most important literature), Trudy GIN no.5:207-222 '56. (MLRA 10:1)
(Feldspar)

STRAKHOV, N.M., akademik, otvetstvennyy red.; BUSHINSKIY, G.I., doktor
geol.-mineral.nauk, red.; PUSTOVALOV, L.V.; KHARAKOV, A.V., kand.
geol.-mineral.nauk, red.; KHVCHOVA, I.V., doktor geol.-mineral.
nauk, red.; ENTIN, M.L., red.izd-va; KRYNOCHKINA, K.V., tekhn.red.

[Methods of studying sedimentary rocks] Metody izucheniia osadoch-
nykh porod. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po geol. i
okhrane nedr. Vol.1. 1957. 610 p. (MIRA 11:2)

1. Akademiya nauk SSSR. Geologicheskii institut. 2. Chlen-korrespon-
dent Akademii nauk SSSR (for Pustovalov)
(Rocks, Sedimentary)

STRAKHOV, N.M., akademik, otvetstvennyy red.; BUSHINSKIY, G.I., doktor
geol.-min.nauk, red.; PUSTOVALOV, I.V., red.; KHABAKOV, A.V., kand.
geol.-min.nauk, red.; KHVOROVA, I.V., doktor geol.-min.nauk;
BABINTSEV, N.I., red. izd-va; KOLOSKOVA, M.I., red.izd-va; ENTIN,
M.L., red.izd-va; KRYNOCHKINA, K.V., tekhn.red.

[Methods for studying sedimentary rocks] Metody izucheniia osadoch-
nykh porod. Moskva, Gos. nauchno-tekhn.izd-vo lit-ry po geol. i
okhrane neдр. Vol.2. 1957. 563 p. (MIRA 11:3)

1. Akademiya nauk SSSR, Geologicheskii institut. 2. Chlen-
korrespondent AN SSSR (for Pustovalov)
(Rocks, Sedimentary)

(PUSTOVALOV, L.V.)

AUTHOR: None Given

5-6-11/42

TITLE: Chronicle of the Activity of the Sedimentary Rock Section
(Khronika deyatel'nosti seksii osadochnykh porod)

PERIODICAL: Byulleten' Moskovskogo Obshchestva Ispytateley Prirody, Otdel
Geologicheskii, 1957, # 6, pp 122-124 (USSR)

ABSTRACT: The following reports were delivered in the Sedimentary Rock
Section from 5 April to 10 May 1957:

M.N. Yakovleva on "Allite Crust of Erosion in Humid Sub-
tropics of the Trans-Caucasus"; L.V. Pustovalov on "Some New
Data on Mineral Product Deposits of Sedimentary and Sedimen-
tary-Metamorphic Origin", and N.G. Brodskaya on "Phosphate
Accumulation in Tertiary Deposits of the Sakhalin' Island".

AVAILABLE: Library of Congress

Card 1/1

SUBJECT: Germany/Geology

11-5-8/15

AUTHOR: Pustovalov, L.V.

TITLE: Deposits of Potash Salts in Gattorf (West Germany) (Mestorozhdeniye kaliynykh soley Gattorf (Federativnaya Respublika Germanii))

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geologicheskaya, 1957²² №5, pp 92-98 (USSR)

ABSTRACT: During the International Congress on Sedimentology in 1954, the author visited the Gattorf potash salt deposit in Western Germany.

The Gattorf deposit belongs to the group of potash salt deposits, of the Werra River basin and is one of the deposits of the Hessen-Thuringia basin, whose age is estimated to be Middle-Zechstein.

The author describes geologic characteristics of the Gattorf deposit and cites some data as to the mining of salt.

The daily output is about 9,500 tons of crude salt with an average content of 16% of sylvite, 24 % of kieserite and 58 to 60 % of sodium chloride. The mined salt is worked over into a

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L-5-8/15

TITLE: Deposits of Potash Salts in Gattorf (West Germany) (Mestorozhdeniye kaliynykh soley Gattorf (Federativnaya Respublika Germanii)

potash fertilizer. The end product contains 67% of potassium chloride.

The article contains 1 geologic map, 2 cross sections and 4 photos. One non-Slavic reference is cited.

ASSOCIATION: Council for Studying Productive Forces, USSR Academy of Sciences in Moskva.

PRESENTED BY:

SUBMITTED: In January 1955

AVAILABLE: At the Library of Congress.

Card 2/2

PUSTOVALOV, L.V.; SERDYUCHENKO, D.P.; GIMMEL'FARB, B.M.; KURMAN, I.M.

Aleksandr Vasil'evich Kazakov; biographical sketch. Trudy Inst.
geol. nauk no.152:3-7 '57. (MLRA 10:9)
(Kazakov, Aleksandr Vasil'evich, 1888-1950)

PUSTOVALOV, L.V., otv. red.; NOSOV, G.I., red. izd-va.; MARKOVICH, S.G.,
tekhn. red.

[Studies on sedimentary mineral deposits] Ocherki osadochnykh
mestorozhdenii poleznykh iskopaemykh. Moskva, Izd-vo Akad.
nauk SSSR, 1958. 84 p. (MIRA 11:11)

1. Akademiya nauk SSSR. Sovet po izucheniyu proizvoditel'nykh sil.
2. Chlen-korrespondent AN SSSR (for Pustovalov).
(Ore deposits)

SULTANOV, Azal' Dzhafarovich; PUSTOVALOV, L.V., otv.red.; pri uchastii:
ATANESYAN, G.Z., sotrudnik; KORNILOVA, A.S., sotrudnik; KERSKAYA, G.V.,
sotrudnik; RAVINA, B.M., sotrudnik; MENZELEYEVA, S.A., sotrudnik;
PAPKOVA, M.K., sotrudnik; RYLINA, Yu.V., tekhn.red.

[Producing formation of the Apsheron Peninsula] Sovet po izucheniiu
proizvoditel'nykh sil. Azerbaidzhanskaya neftyanaya ekspeditsiya.
Litologiya produktivnoi tolshchi Apsheronskogo poluostrova. Moskva,
1958. 140 p. (MIRA 11:12)

1. Akademiya nauk SSSR. Sovet po izucheniyu proizvoditel'nykh sil.
Azerbaidzhanskaya neftyanaya ekspeditsiya. 2. Chlen-korrespondent
AN SSSR (for Pustovalov). 3. Litologicheskaya laboratoriya Insti-
tuta geologii AN Azerbaydzhanskoy SSR (for Atanesyan, Kornilova,
Kerskaya, Ravina, Menzeleyeva, Papkova)
(Apsheron Peninsula--Petrology)

PUSTOVALOV, L.V., otvetstvennyy red.; DMITRIYEV, Ye.Ya., zamestitel'
otvetstvennogo red.; TOPCHIYEV, A.V., akademik, red.; MIRONOV,
S.I., akademik, red.; ALIYEV, M.M., red.; AKHMEDOV, G.A., red.;
VARENTSOV, M.I., red.; DOLGOPOLOV, N.N., red.; IL'IN, A.A., red.;
MEKHTIYEV, Sh.F., red.; MIRCHINK, M.P., red.; MOZESON, D.L., red.;
RENGARTEN, V.P., red.; FOMIN, A.V., red.; IL'INA, N.S., red.
izd-va; NOVICHKOVA, N.D., tekhn. red.

[Geology of the Talysh Mountains; papers of the expedition]
Voprosy geologii Talysha; trudy ekspeditsii. Moskva, 1958. 151 p.
(MIRA 11:9)

1. Akademiya nauk SSSR. Sovet po izucheniyu proizvoditel'nykh sil.
Azerbaydzhanskaya neftyanaya ekspeditsiya. 2. Deystvitel'nyy
chlen Akademii nauk AzSSR (for Aliyev). 3. Chlen-korrespondent
Akademii nauk SSSR (for Varentsov, Mekhtiyev, Pustovalov,
Rengarten).

(Talysh Mountains---Geology)

Pustovalov, L.V.

11-1-24/29

AUTHORS: Pustovalov, L.V., Borukayev, P.A., Pavlovskiy, Ye.V.

TITLE: The Second Session of the International Association for the Study of Plutonic Zones of the Earth's Crust in Scotland
(II sessiya mezhdunarodnoy assotsiatsii po izucheniyu glubinnnykh zon zemnoy kory v Shotlandii)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geologicheskaya, 1958, v. 23, # 1, pp 111-112 (USSR)

ABSTRACT: The second session of the International Association for the study of plutonic zones of the earth was held at Edinburgh on September 12, 1957. The USSR Academy of Sciences was represented by member-correspondent L.V. Pustovalov, academician R.A. Borukayev, of the Kazakhstan Academy of Sciences, doctor of geologic-mineral sciences Ye.V. Pavlovskiy (Geological Institute of the USSR Academy of Sciences) and secretary N.V. Khabarin. The leader of the Soviet delegation, R.A. Borukayev was elected president of the convention. The members of the convention had the opportunity to study the ancient geologic formations of Scotland at the occasion of several excursions. It was decided to hold the

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11-1-24/29

The Second Session of the International Association for the Study of
'Plutonic Zones of the Earth's Crust in Scotland

third session of the International Association in France in
1959.

AVAILABLE: Library of Congress

Card 2/2

ZHABREV, Daniil Vasil'yevich; MEKHTIYEV, Shafayat Farkhadovich; PUSTOVALOV, L.V., otv.red.; DMITRIYEV, Ye.Ya., zam. otv.red.; TOPCHIYEV, A.V., akademik, red.; MIRONOV, S.I., akademik; red.; ALIYEV, M.M., red.; AKHMEDOV, G.A., red.; VARENTSOV, M.I., red.; DOLGOPOLOV, N.N., red.; IL'IN, A.A., red.; MIRCHINK, M.F., red.; MOZESON, D.L., red.; FOMIN, A.V., red.; POLEVA, Ye.M., red.izd-va; KASHINA, P.S., tekhn.red.

[Bituminology of the Tertiary complex of southeastern Azerbaijan]
K bituminologii tretichnogo kompleksa iugo-vostoka Azerbaidzhana.
Moskva, Izd-vo Akad.nauk SSSR, 1959. 110 p. (MIRA 12:6)

1. Chlen-korrespondent AN AzSSR (for Mekhtiyev).
2. Chlen-korrespondent AN SSSR (for Pustovalov, Varentsov, Mirchink).
3. Daystvitel'nyy chlen AN AzSSR (for Aliyev).
(Azerbaijan--Bitumen)

30(5), 32(0)

SOV/30-59-2-7/60

AUTHORS:

Pustovalov, L. V., Corresponding Member, Academy of Sciences, USSR, Krotov, V. A., Professor, Shkol'nikov, M. G., Candidate of Economic Sciences

TITLE:

The Development of the Productive Forces in East Siberia
(Razvitiye proizvoditel'nykh sil Vostochnoy Sibiri)

PERIODICAL:

Vestnik Akademii nauk SSSR, 1959, Nr 2, pp 34-42 (USSR)

ABSTRACT:

In the present paper the authors deal with the economic possibilities of East Siberia. They mention the vast deposits of coal and the favorable technical and economic figures of their utilization (Kansko-Achinsk and Irkutsk Basin as well as the deposits of Transbaykal). On the rivers Angara and Yenisey it is possible to construct huge water-power plants at low building costs. Vast deposits of iron ore were also found in the Krasnoyarskiy kray, Irkutskaya oblast', Yakutskaya ASSR and the Chitinskaya oblast'. Apart from this, East Siberia has rich deposits of diamonds, gold, glimmer, ores of non-ferrous and rare metals, raw material for the production of aluminum, magnesium and titanium. Graphite, asbestos, talc, magnesite, fluor-spar and piezoquartz were also discovered. The chemical substances

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SOV/30-59-2-7/60

The Development of the Productive Forces in East Siberia

Study of Productive Forces) together with the Gosplan' SSSR (Gosplan of the USSR) and the Gosplan of the RSFSR, the Sovnarkhozes of the economic administration districts of East Siberia, the scientific branch research and designing prospecting institutions as well as the universities have the task of intensifying the investigation of productive forces in East Siberia.

Card 3/3

3(0)

SOV/30-59-2-21/60

AUTHORS: Pustovalov, L. V., Corresponding Member, Academy of Sciences,
USSR

Pavlovskiy, Ye. V., Professor

TITLE: News in Brief (Kratkiye soobshcheniya)
Third Meeting of the International Association for the
Research of the Depth Zones in the Earth's Crust (3-ya ses-
siya Mezhdunarodnoy assotsiatsii po izucheniyu glubinnykh
zon zemnoy kory)

PERIODICAL: Vestnik Akademii nauk SSSR, 1959, Nr 2, p 79 (USSR)

ABSTRACT: The Meeting was held in France between September 16 and
September 26, 1958. Scientists from the following countries
took part: Australia, Algeria, Belgium, the Belgian Congo,
the Netherlands, Madagascar, the Soviet Union, France and
Switzerland. Academician A. A. Polkanov, head of the Soviet
delegation was unanimously elected chairman of the Meeting.
He reported on the geology of isotopes. L. V. Pustovalov
showed a film on the previous Meeting of the Association
which took place in Scotland. It was decided to hold the 4th
Meeting in 1959 in the German Federal Republic. The Soviet

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SOV/30-59-2-21/60

News in Brief. Third Meeting of the International Association for the
Research of the Depth Zones in the Earth's Crust

delegation was requested to decide together with the Prezidium Akademii nauk SSSR (Presidium of the Academy of Sciences, USSR) whether it is possible to hold the 5th Meeting of the Association in 1961 in the USSR. The Soviet delegation had the chance of visiting a number of museums, scientific institutions and laboratories.

Card 2/2

SOV/11-59-2-12/14

AUTHORS: Pavlovskiy, Ye.V., and Pustovalov, L.V.

TITLE: The Third Session of the International Association for the Study of Plutonic Zones of the Earth's Crust (16-26 Sep 1958) (The Central Massif of France) Tret'ya sessiya mezhdunarodnoy assotsiatsii po izucheniyu glubinnykh zon zemnoy kory (16-26.9.1958) (Tsentral'nyy massiv Frantsii)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geologicheskaya, 1959, vol 2.4, Nr 2, pp 124-127 (USSR)

ABSTRACT: In the Third Session of the above mentioned Association, the Soviet delegation which took part in the Session was composed of Academician A.A. Polkanov (leader of the delegation), **Corresponding Member** of the AS of the USSR L.V. Pustovalov, Academician of the AS of KazakhSSR R.A. Borukayev, Professor Doctor Ye.V. Pavlovskiy (GIN, AN SSSR) and Doctor I.Kh. Khamrabayev (AS, Uzhek SSR).

Card 1/1

3(8)

SCV/11-59-3-15/17

AUTHOR: Pustovalov, L.V.

TITLE: The 5th Session of the International Congress on Sedimentology in Switzerland (Pyataya sessiya mezhdunarodnogo kongressa po sedimentologii v Shveytsarii)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geologicheskaya, 1959, Nr 3, pp 119-122 (USSR)
vol. 24

ABSTRACT: The 5th Session of the International Congress on Sedimentology, held in Geneva from June 2-11, 1958, was attended by a Soviet delegation composed of Corresponding Member of the AS USSR L.V. Pustovalov (head of the Soviet delegation), Doctor P.L. Bezrukov (Institute of Oceanography of the AS USSR), Candidate of Geologic Mineralogic Sciences B.N. Mitreykin, Doctor S.G. Sarkisyan (Institute of Petroleum of the AS USSR), Doctor I.V. Khvorova (GIN AN SSSR -- Geological Institute of the AS USSR) and V.I. Ayvazova (secretary-interpreter).
Card 1/4 In addition, the following Soviet scientists, visit-

SOV/11-59-3-15/17

The 5th Session of the International Congress on Sedimentology
in Switzerland

ing Switzerland as tourists, participated in the 5th Session of the above-mentioned Congress: Candidate of Geologic-Mineralogic Sciences, A.M. Akhramkhodzhayev (AS UzbSSR), Candidate of Geologic and Mineralogic Sciences V.I. Danchev, Candidate of Geologic-Mineralogic Sciences A.G. Kossovskaya (Geological Institute of the AS USSR), Professor, Doctor L.V. Rukhin (LGU - Leningrad State University), Doctor G.I. Teodorovich (Institute of Petroleum of the AS USSR) and Candidate of Geologic-Mineralogic Sciences V.D. Shutov (Geological Institute of the AS USSR). Soviet scientists submitted 16 papers or more than 15 per cent of all papers included on the agenda to the Orgkomitet Kongressa (Organizing Committee of the Congress). Of the 16 Soviet papers, 8 were read by: P.L. Bezrukov on the results of geological investigations of deep-water grooves in the NW part of the Pacific Ocean on the "Vityaz'" ship; A.G. Kossovskaya and V.D. Shutov on zonality in the structure of terrigenous deposits

Card 2/4

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The 5th Session of the International Congress on Sedimentology
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of plateaus and geosynclines; L.V. Pustovalov on the formation of secondary deposits of sedimentary useful minerals; L.B. Rukhin on the significance of intervals in the deposit formation; S.G. Sarkisyan on petrographical and mineralogical investigations in the petroleum industry of the USSR; S.G. Sarkisyan on the upper-Permian fractured rock in the Predural'ye; G.I. Teodorovich on results in the study of dolomite rock in the USSR and I.V. Khvorova on the carbonate flysch and the Permian fractured rock of the Urals. The remaining 8 papers by Soviet scientists (N.B. Vassoyevich, V.V. Veber, M.V. Klenova, G.F. Krashennikov, Ye.V. Rukhina, N.M. Strakhov and M.S. Shvetsov) were not made public to the Congress due to absence of the speakers. All 16 Soviet papers were accepted by the Organizing Committee of the Congress

Card 3/4

307/11-59-3-15/17

The 5th Session of the International Congress on Sedimentology
in Switzerland

for publication in the Transactions of the 5th
Session of the International Congress on Sedimento-
logy. It was decided to hold the 6th Session of
the International Congress on Sedimentology in Copen-
hagen in 1960 in conjunction with the 21st Session
of the International Geological Congress.

Card 4/4

PUSTOVALOV, L.V.; PAVLOVSKIY, Ye.V., prof.

Third session of the International Association on the Study
of Deep Zones of the Earth's Crust. Vest.AN SSSR 29 no.2:79
F '59. (MIRA 12:4)

1. Chlen-korrespondent AN SSSR (for Pustovalov)
(France--Geology--Congresses)

AMIRASLANOV, A.A., red.; KOSOV, B.M., red.; PUSTOVALOV, L.V., red.;
SHATALOV, Ye.T., red.; VERSTAK, G.V., red. izd-va; BYKOVA,
V.V., tekhn. red.

[Applied geology; problems of metallogeny] Prikladnaia geologiya;
voprosy metallogenii. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po
geol. i okhrane neдр, 1960. 134 p. (Doklady sovetskikh geologov.
Problema 20). (MIRA 13:11)

1. International Geological Congress. 21st, Copenhagen, 1960.
(Ore deposits)

BARDIN, I.P., akademik, glavnyy red. [deceased]; PUSTOVALOV, L.V., otv.
red.toma; OBRUCHEV, V.V., kand.geol.-min.nauk, red.toma;
IVANOV, B.V., red.izd-va [deceased]; VOLKOVA, V.V., tekhn.red.

[Geology; transactions of the Conference on the Development of
Productive Forces of Eastern Siberia] Geologicheskoe stroenie;
trudy Konferentsii po razvitiyu proizvoditel'nykh sil Vostochnoi
Sibiri. Moskva, Izd-vo Akad.nauk SSSR, 1960. 152 p.
(MIRA 13:10)

1. Konferentsiya po razvitiyu proizvoditel'nykh sil Vostochnoy
Sibiri, 1958. 2. Chlen-korrespondent AN SSSR (for Pustovalov).
(Siberia, Eastern--Geology, Economic)

ZUBKOV, A.I., kand.ekonom.nauk, otv.red.; NEMCHINOV, V.S., akademik, red.;
PUSTOVALOV, L.V., red.; NEKRASOV, N.N., red.; KLIMOV, V.A., red.
izd-va; TIKHOMIROVA, S.G., tekhn.red.

[Prospects for the expansion of coal mining and power engineering
in the Krasnoyarsk Territory] Perspektivy razvitiia ugol'noi
promyshlennosti i energetiki Krasnoyarskogo kraia. Moskva, 1960.
163 p. (MIRA 14:1)

1. Akademiya nauk SSSR. Krasnoyarskaya kompleksnaya ekspeditsiya.
2. Krasnoyarskaya kompleksnaya ekspeditsiya Soveta po izucheniyu
proizvoditel'nykh sil pri Prezidiume Akademii nauk SSSR (for Zubkov).
3. Chleny-korrespondenty AN SSSR (for Pustovalov, Nekrasov).
(Krasnoyarsk Territory--Power engineering)
(Krasnoyarsk Territory--Coal mines and mining)

BARDIN, I.P., akademik, otv.red. [deceased]; LYUDOGOVSKIY, G.I., zam. otv.red.; PUSTOVALOV, L.V., red.; FEDOTOV, A.A., red.; GERBOV, V.L., red.; OVCHININSKIY, N.V., red.; SHLEPOV, V.K., red.izd-vs; SUSHKOVA, L.A., tekhn.red.

[Development of ferrous metallurgy in areas to the east of the Lake Baikal] Problemy razvitiia chernoi metallurgii v raionakh vostochnnee oz. Baikal. Moskva, 1960. 190 p.

(MIRA 14:2)

1. Akademiya nauk SSSR. Sovet po izucheniiyu proizvoditel'nykh sil.
2. Chlen-korrespondent AN SSSR (for Pustovalov).
(Siberia, Eastern--Iron industry)

BARDIN, I.P., akademik, glavnyy red. [deceased]; KHACHATUROV, T.S., otv. red.toma; SMIRNOV, A.P., zam.otv.red.toma; VERKHOVSKIY, I.A., red.toma; NEKRASOVA, R.I., red.toma; TSENIN, S.S., red.toma; LAVRENT'YEV, M.A., red.; VOL'FKOVICH, S.I., red.; DIKUSHIN, V.I., red.; NEMCHINOV, V.S., red.; VEYTS, V.I., red.; LEVITSKIY, O.D., red.; NEKRASOV, N.N., red.; PUSTOVALOV, L.V., red.; ROSTOVTSSEV, N.F., akademik, red.; POPOV, A.N., red.; GRAFOV, L.Ye., red.; GASHEV, A.D., red.; PROBST, A.Ye., prof., red.; VASYUTIN, V.F., prof., red.; KROTOV, V.A., prof., red.; VASIL'YEV, P.V., doktor ekonom.nauk, red.; LYUDOGOVSKIY, G.I., kand. tekhn.nauk, red.; LETUNOV, P.A., kand.geol.-miner.nauk, red.; SHKOL'NIKOV, M.G., kand.ekon.nauk, red.; RODINA, Ye.D., red.izd-va; GUSEVA, A.P., tekhn.red.

[Transportation; proceedings of the Conference on the Development of Productive Forces of Eastern Siberia] Transport; trudy Konferentsii po razvitiyu proizvoditel'nykh sil Vostochnoi Sibiri. Moskva, Izd-vo Akad.nauk SSSR, 1960. 203 p. (MIRA 13:10)

(Continued on next card)

BARDIN, I.P.---(continued) Card 2.

1. Konferentsiya po razvitiyu proizvoditel'nykh sil Vostochnoy Sibiri, 1958. 2. Chleny-korrespondenty AN SSSR (for Khachaturov, Veyts, Levitskiy, Nekrasov, Pustovalov). 3. Vsesoyuznaya akademiya sel'sko-khozyaystvennykh nauk imeni V.I.Lenina (for Rostovtsev). 4. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR (for Popov). 5. Zam.predsdatelya Gosplana RSFSR (for Grafov). 6. Chlen Gosplana RSFSR (for Gashev). 7. Institut kompleksnykh transportnykh problem AN SSSR (for Khachaturov, Verkhovskiy, Nekrasova, TSenin, Smirnov).
(Siberia, Eastern--Transportation)

~~PUSTOVALOV, L.V.~~, otv.red.; GIMMEL'FARB, E.M., red.; KRASHENINNIKOV,
G.F., red.; SARKISYAN, S.G., red.; SERDYUCHENKO, D.P., red.;
TEODOROVICH, G.I., red.; SHVETSOV, M.S., red.; SMIRNOVA, Z.A.,
red.izd-va; IVANOVA, A.G., tekhn.red.

[Problems of sedimentology; reports of Soviet geologists for
the Sixth International Congress of Sedimentology] Voprosy sedi-
mentologii; doklady sovetskikh geologov k VI Mezhdunarodnomu
kongressu po sedimentologii. Moskva, Gos.nauchno-tekhn.izd-vo
lit-ry po geol. i okhrane nedr, 1960. 215 p.

(MIRA 14:3)

1. International Congress of Sedimentology. 6th, Copenhagen,
1960.

(Rocks, Sedimentary)

ROSTOVTSSEV, N.F., akademik, glavnyy red.toma; SOKOLOV, N.S., prof., red.
toma; LETUNOV, P.A., kand.geol.-mineral.nauk, red.toma; KUZMICHEV,
A.V., kand.biolog.nauk, red.toma; KRYLOV, P.A., kand.biolog.nauk,
red.toma; RUZSKAYA, Ye.A., kand.biolog.nauk, red.toma; CEMBER,
B.Ye., kand.biolog.nauk, red.toma; BARDIN, I.P., akademik, glavnyy
red. [deceased]; LAVRENT'YEV, M.A., akademik, red.; VOL'FKOVICH,
S.I., akademik, red.; DIKUSHIN, V.I., akademik, red.; NEMCHINOV,
V.S., akademik, red.; VEYTS, V.I., red.; LEVITSKIY, O.D., red.;
NEKRASOV, N.N., red.; PUSTOVALOV, L.V., red.; KHACHATUROV, T.S.,
red.; POPOV, A.N., red.; GRAFOV, L.Ye., red.; GASHEV, A.D., red.;
VASYUTIN, V.F., prof., red.; PROBST, A.Ye., prof., red.; KROTOV,
V.A., prof., red.; VASIL'YEV, P.V., doktor ekonom.nauk, red.;
LYUDOGOVSKIY, G.I., kand.tekhn.nauk, red.; SHKOL'NIKOV, M.G.,
kand.ekonom.nauk, red.; KLYUSHKIN, P.A., red.izd-va; DOROKHINA,
I.N., tekhn.red.

(Continued on next card)

ROSTOVTSEV, N.F.---(continued) Card 2.

[Development of the resources of Eastern Siberia: agriculture]
Razvitie proizvoditel'nykh sil Vostochnoi Sibiri: Sel'skoe kho-
zsisstvo. Moskva, Izd-vo Akad.nauk SSSR, 1960. 426 p.

(MIRA 13:6)

1. Konferentsiya po razvitiyu proizvoditel'nykh sil Vostochnoy Sibiri. 1958, Irkutsk. 2. Vsesoyuznaya akademiya sel'skokho-
zyaystvennykh nauk im. V.I.Lenina (for Rostovtsev). 3. Chlen-
korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk
im. V.I.Lenina (for Sokolov). 4. Chleny-korrespondenty AN SSSR
(for Veyts, Levitskiy, Nekrasov, Pustovalov, Khachaturov). 5. Day-
stvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR (for
Popov). 6. Zamestitel' predsedatelya Gosplana RSFSR (for Grafov).
7. Chlen Gosplana RSFSR (for Gashev).

(Siberia, Eastern---Agriculture)

PUSTOVALOV, L.V.; PAVLOVSKIY, Ye.V.

Fourth session of the International Association for the
Study of Deep Crustal Zones in West Germany, September 9-25,
1959. Sov.geol. 3 no.5:131-135 My '60.
(MIRA 13:7)

1. Geologicheskii institut AN SSSR.
(Germany, West--Geology)

PUSTOVALOV, LEONID V. (Prof. corres. mbr. Acad. of Sci. USSR)

"The Angara Pit Ore Basin" (19 n Aug 60 Sessions)

report to be presented at the Sixth Intl. Sedimentological Congress Intl Association
of Sedimentology, Cophnhagen, Denmark. 15-25 Aug 1960

PUSTOVALOV, I.V.

Present status and basic trends of the further development of
geological science. Sov. geol. 7 no.2 1935 Ag '64. (MIRA 17:10)

PUSTICVALOV, L.V.

Ways of the development of geological science. Biol. MOIP. 64.
geol. 39 no.2:120-129 Mr-Apr '64. (MIRA 19:1)

PUSTOVALOV, L.V., otv. red.; AL'TGAUZEN, M.N., doktor geol.-
min. nauk, red.; VLASOV, K.A., red.[deceased]; DOLGOFOLOV,
N.N., red.; IVENSEN, Yu.P., doktor geol.-min.nauk, red.;
POZHARITSKIY, K.L., doktor geol.-min. nauk, red.;
SERDYUCHENKO, D.P., doktor geol.-min. nauk, red.; KRASNOVA,
N.E., red.

[Metals in sedimentary formations; heavy nonferrous, minor
and rare metals] Metally v osadochnykh tolshchakh; tiazhelye
tsvetnye metally malye i redkie metally. Moskva, Nauka,
1965. 389 p. (MIRA 19:1)

1. Moscow. Laboratoriya osadochnykh poleznykh iskopayemykh.

PUSTOVALOV, L.V., otv. red.

[Ore potential of the Russian Platform] Rudonosnost' Rus-
skoi platformy. Moskva, Nauka, 1965. 218 p.
(MIRA 18:8)

1. Laboratoriya osadochnykh poleznykh iskopayemykh.
2. Chlen-korrespondent AN SSSR.

PUSTOVALOV, L.V., otv. red.; AL'TGAUZEN, M.N., doktor geol.-min.
nauk, red.; DOLGOPLOV, N.M., red.; IVENSEN, Yu.P.,
doktor geol.-min. nauk, red.; VLASOV, K.A., doktor
geol.-min. nauk, red.; POZHARITSKIY, K.L., doktor geol.-
min. nauk, red.; SERDYUCHENKO, D.P., doktor geol.-min.
nauk, red.

[Metals in sedimentary formations; ferrous metals, non-
ferrous light metals] Metally v osadochnykh tolshchakh;
chernye metally, tsvetnye legkie metally. Moskva, Izd-vo
"Nauka," 1964. 443 p. (MIRA 17:8)

1. Akademika nauk SSSR. Laboratoriya osadochnykh poleznykh
iskopayemykh. 2. Chlen-korrespondent AN SSSR (for Pustovalov,
Vlasov).

SOKOLOVA, Yelena Ivanovna; PUSTOVALOV, L.V., ~~otv.~~ red.; FEODOT'YEV,
K.M., red. izd-va; MAKOGONOVA, I.A., tekhn. red.

[Physicochemical investigation of sedimentary iron and manganese
ores and enclosing rocks (oxidation-reduction and basic-acid
properties of sedimentary ore-bearing complexes)] Fiziko-
khimicheskie issledovaniia osadochnykh zheleznykh i margantsevykh
rud i vmeshchaiushchikh ikh porod (okislitel'no-vosstanovitel'nye
i shchelochno-kislotnye svoistva osadochnykh rudonosnykh kompleksov).
Moskva, Izd-vo Akad. nauk SSSR, 1962. 214 p. / (MIRA 15:5)

1. Chlen-korrespondent Akademii nauk SSSR (for Pustovalov).
(Iron ores) (Manganese ores)

LIKHANOV, B.N.; KHAUSTOVA, M.N.; YEROKHINA, A.A.; MARKOV, F.G.; SPIZHARSKIY, T.N.; DODIN, A.L.; KHIL'TOVA, V.Ya.; CHEREPNIN, L.M.; GROMOV, L.V., kand. geol.-mineral. nauk; SHCHERBACHEV, V.D.; SHUTYY, M.Ye.; NEMCHINOV, V.S., akad., red.; NEKRASOV, N.N., red.; PUSTOVALOV, L.V., red.; ZUBKOV, A.I., kand. ekon. nauk, red.; KAVUN, T.K., red. izd-va; SUSHKOVA, L.A., tekhn. red.

[Natural conditions of Krasnoyarsk Territory] Prirodnye usloviia Krasnoyarskogo kraia. Moskva, Izd-vo Akad. nauk SSSR, 1961. 248 p.
(MIRA 14:7)

1. Krasnoyarskaya kompleksnaya ekspeditsiya. 2. Institut geografii AN SSSR (for Likhanov, Khaustova). 3. Pochvennyy institut im. V.V. Dokuchaeva AN SSSR (for Yerokhina). 4. Nauchno-issledovatel'skiy institut geologii Arktiki Ministerstva geologii i okhrany neдр SSSR (for Markov). 5. Vsesoyuznyy geologicheskii institut Ministerstva geologii i okhrany neдр SSSR (for Spizharskiy, Dodin). 6. Laboratoriya geologii dokembriya AN SSSR (for Khil'tova). 7. Krasnoyarskiy pedagogicheskii institut Ministerstva prosveshcheniya RSFSR (for Cherepnin). 8. Sovet po izucheniyu proizvoditel'nykh sil pri Prezidiume AN SSSR (for Gromov, Likhanov, Khaustova, Yerokhina, Shcherbachev, Shutyy). 9. Chlen-korrespondent AN SSSR (for Nekrasov, Pustovalov)

(Krasnoyarsk Territory--Natural history)

PHASE I BOOK EXPLOITATION SOV/5494

Vasil'yev, Mikhail Vasil'yevich, and Sergey Zakharovich Gushchev
Reportazh iz XXI veka: My zapiski razskazy dvudtsati devyati
sovetakikh uchenykh o nauke i tekhnike buduchezso (Reportazh
from the Twenty-First Century: Stories of the Future) [Moscow]
Scientists on Science and Engineering of the Future
Izd-vo Sovetskaya Rossiya, 1958. 243 p. 50,000 copies printed.

Ed.: V. A. Golubkova; Tech. Ed.: O. I. Kleyeva.

PURPOSE: This book is intended for the general reader.
COVERIOR: The book contains 27 articles (told reporters by
Soviet scientists) dealing with probable future projects in
physics, chemistry, electricity, metallurgy, engineering,
mining, medicine, biology, agriculture, zoology, transition to
exploration of space, and photography. Attention is given to
automation, automatic underground exploitation of oil, stations,
new metals, modernization of oil fields, atomic electric stations,
production of metal parts by the process of explosion, explosions
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Reports From the Twenty-First (Cont.) SOV/5494

in dam construction, cancer, internal longevity reserves,
machine diagnoses of illnesses, surgery vs. treatment by ultra-
sonic vibrations, mechanical heart substitutes, human body built,
"medical engineering, enriched fodder, "superfertilizers", arti-
ficial snowfalls, agriculture vs. "mariculture", radioindustry,
power beam vs. "laser", machines doing intellectual work, "auto-
mobiles" (with "radio-motors"), "artificial sun" (electro-
netic rays focused above a city which cause heated molecules
to shine), future ocean ships, "railway dreamthoughts", Moscow
of the future, moving pavements, wheelless and driveless auto-
mobiles, electric boats, the industrialization of Siberia,
use of underground heat, climate control, living on the moon,
antimatter, and photon jet. Names of the interviewed scientists
are given. There are no references.

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THE FUNDAMENTAL AND MOST IMPORTANT THINGS

Transformation of Elements -- the Future of Metallurgy [I. P.
Bardin, Academician, Vice-President, AS USSR]

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Mines Are Breathing Their Last [I. S. Garkusha, Director of
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Siberia Through a Stratoplane Window [L. V. Pustovalov, Corresponding Member, AS USSR, Vice-Chairman, Sovet po izucheniyu Card 6/7]

BARDIN, I.P., akademik, glavnyy red. [deceased]; NEKRASOV, N.N., otv. red.toma; SLAVIN, S.V., doktor ekon.nauk, red.toma; SHKOL'NIKOV, M.G., kand.ekon.nauk, red.toma; LAVRENT'YEV, M.A., akademik, red.; VOL'PKOVICH, S.I., akademik, red.; DIKUSHIN, V.I., akademik, red.; NEMCHINOV, V.S., akademik, red.; VEYTS, V.I., red.; LEVITSKIY, O.D., red.; PUSTOVALOV, L.V., red.; KHACHATUROV, T.S., red.; ROSTOVTSSEV, N.F., akademik, red.; POPOV, A.N., red.; GRAFOV, L.Ye., red.; GASHEV, A.D., red.; PROBST, A.Ye., prof., red.; VASYUTIN, V.F., prof., red.; KROTOV, V.A., prof., red.; VASIL'YEV, P.V., doktor ekon.nauk, red.; LYUDOGOVSKIY, G.I., kand.tekhn.nauk, red.; LETUNOV, P.A., kand.geol.-mineral.nauk, red.; MAZOVER, Ya.A., red. izd-va; KASHINA, P.S., tekhn.red.

[Comprehensive regional and interregional problems; [conference reports]] Raznoye i mezhraionnye kompleksnye problemy; [trudy konferentsii]. Moskva, Izd-vo Akad.nauk SSSR, 1960. 190 p. (MIRA 14:1)

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